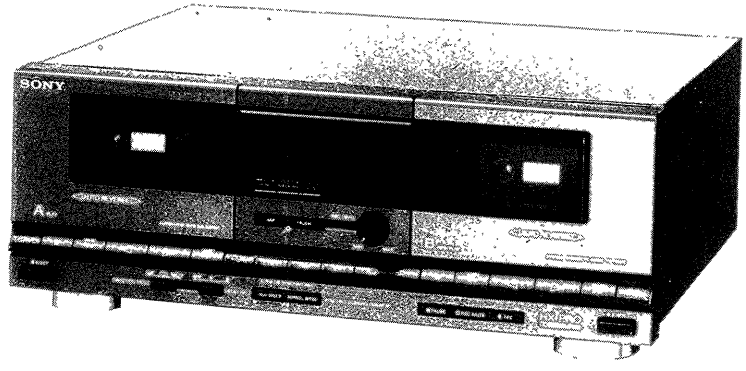
TC-D705

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model



Model Name Using Similar Mechanism		TC-D505
Tape Transport Mechanism Type	DECK A	TCM-190RA13
	DECK B	TCM-190RB13

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response	DOLBY NR OFF With Type IV cassette (Sony METAL-ES) 30 Hz to 15 kHz (±3 dB) With Type II cassette (Sony UX-S) 40 Hz to 14 kHz (±3 dB) With Type I cassette (Sony HF-S) 40 Hz to 14 kHz (±3 dB)
Wow and flutter	±0.2% (DIN)
Weight	Approx. 3.4 kg (7 lbs 8 oz)
Dimensions	Approx. 355 × 132.5 × 310 mm (w/h/d, including projections) (14 × 5 1/4 × 12 1/4 inches)

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY", the double-D symbol ⧈ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

STEREO CASSETTE DECK

SONY®

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

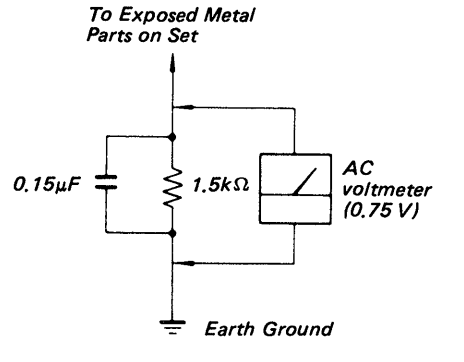


Fig. A. Using an AC voltmeter to check AC leakage.

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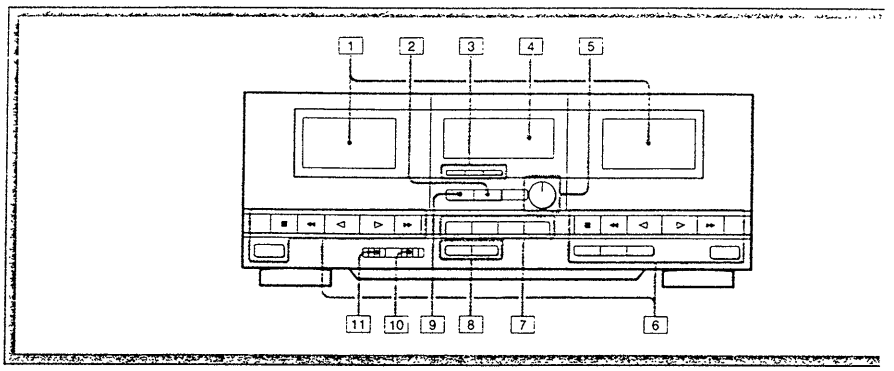
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
GENERAL

This section is extracted from instruction manual.

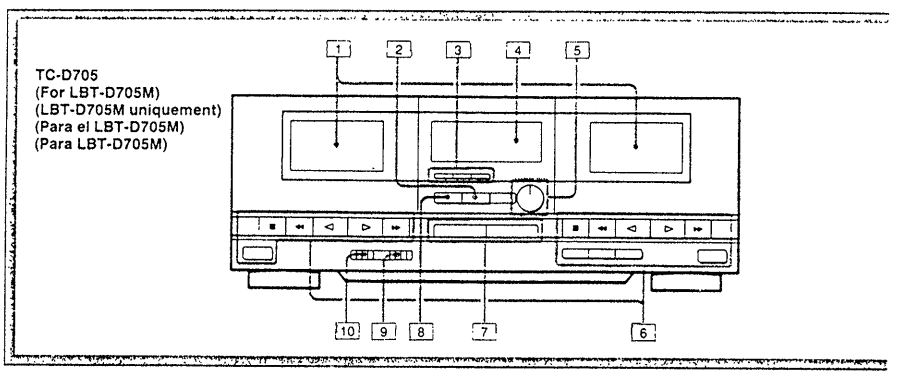
AEP/Germany/Italian/E3 model



Cassette deck

1 Cassette holders
2 FADER button ㉞
3 COUNTER setting buttons ㉕
4 Display window
5 REC (recording) LEVEL control and indicator ㉜
6 Tape operation buttons
◀◀ Leftward fast winding/AMS*, ▶▶ Rightward fast winding/AMS*, ▶ Forward play, ◀ Reverse play, ■ Stop, ⏏ Eject, ❚❚ Pause (deck B only), O Record muting (deck B only), ● Record (deck B only)
7 AUTO CD SYNCHRO REC buttons and indicators
C.(Cross) FADE
FADE
EDIT
TIME
(only for the system used with CDP-M42) ㊷
8 SYNCHRO DUBBING buttons ㊳
9 ARL (Automatic Recording Level) button and indicator ㉜
10 DOLBY NR (noise reduction) switch ㉙
11 DIRECTION MODE selector ㉘

UK/E2/Australian model



Cassette deck

1 Cassette holders
2 FADER button ㉞
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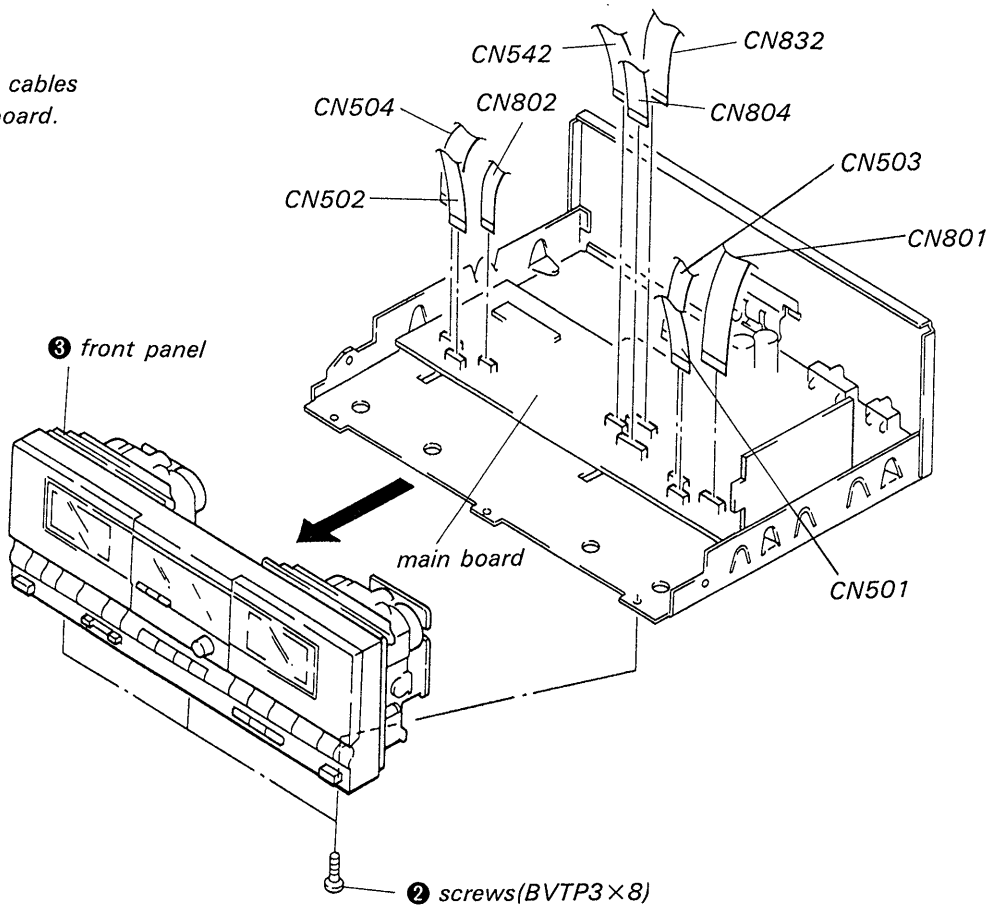
4 Display window
5 REC (recording) LEVEL control and indicator ㉜
6 Tape operation buttons
◀◀ Leftward fast winding/AMS*, ▶▶ Rightward fast winding/AMS*, ▶ Forward play, ◀ Reverse play, ■ Stop, ⏏ Eject, ❚❚ Pause (deck B only), O Record muting (deck B only), ● Record (deck B only)
7 SYNCHRO DUBBING buttons ㊳
8 ARL (Auto Recording Level) button and indicator ㉜
9 DOLBY NR (noise reduction) switch ㉙
10 DIRECTION MODE selector ㉘

SECTION 2
DISASSEMBLY

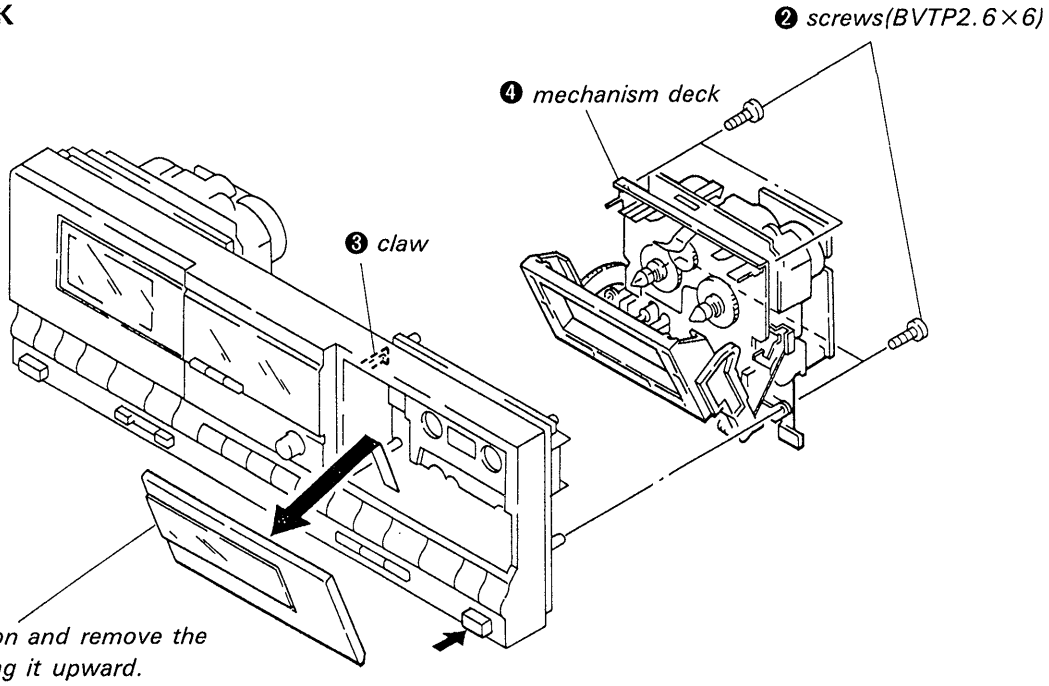
Note:Follow the disassembly procedure in the numerical order given.

FRONT PANEL

❶ *Remove the flat cables from the main board.*



MECHANISM DECK



SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
   record/playback head　　pinch roller
   erase head　　rubber belts
   capstan　　idler
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed in the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	35 to 60g · cm (0.49 to 0.83 oz · inch)
FWD Back tension	CQ-102C	2 to 6g·cm (0.03 to 0.08 oz·inch)
REV	CQ-102RC	35 to 60g · cm (0.49 to 0.83 oz · inch)
REV Back tension	CQ-102RC	2 to 6g·cm (0.03 to 0.08 oz·inch)
FF, REW	CQ-201B	70 to 110g · cm (0.98 to 1.52 oz · inch)

SECTION 4
ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in the service manual. As a rule, adjustment about playback should be performed before adjustment about recording.
The adjustments should be performed for both L-CH and R-CH.

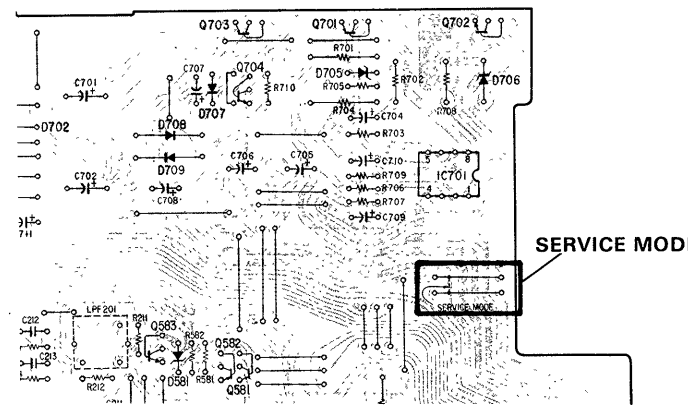
●Test Mode

The Test mode is activated by shorting Test Point Service mode (IC851 34 pin changes over to "L") with the POWER switch in OFF position, then turning on the POWER switch.
In this mode, the following functions operate:

1. Source monitor
   Line mute is cancelled during recording.
2. High speed playback
   High speed playback is executed when the HIGH SPEED (BUBBING) button is pressed during playback. Normal speed playback is restored when the button is pressed again.
3. Record memory
   The tape counter is reset to "0" at the record start point.

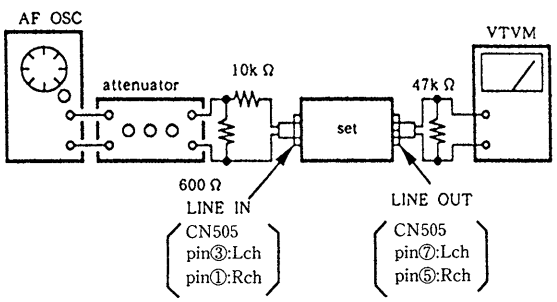
After adjustment, open the Service mode to cancel the Test mode.

[MAIN BOARD] (CONDUCTOR SIDE)



- Switches and controls should be set as follows unless otherwise specified.
  DD NR switch : OFF
  DIR MODE switch : ⇄
- Standard Record:
  Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

– Record Mode –



Standard Input Level

input terminal	LINE IN
source impedance	10kΩ
input level	0.25V (−10dB)

Standard Output Level

output terminal	LINE OUT
load impedance	47kΩ
output level	0.44V (−5dB)

Test tape

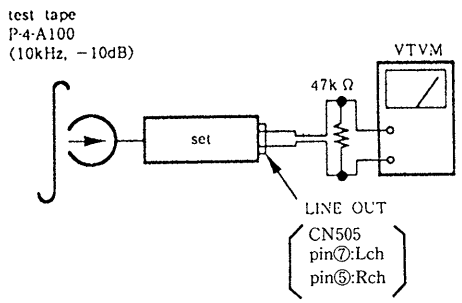
Type	Signal	Used for
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

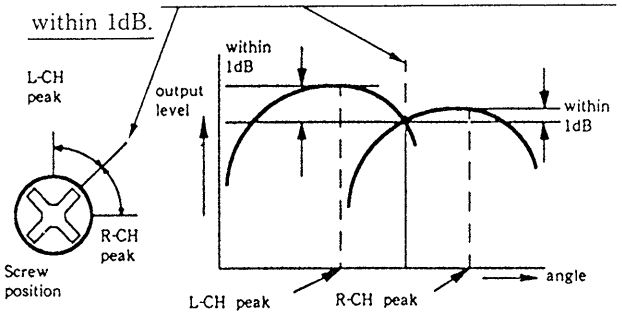
DECK A DECK B

Procedure :

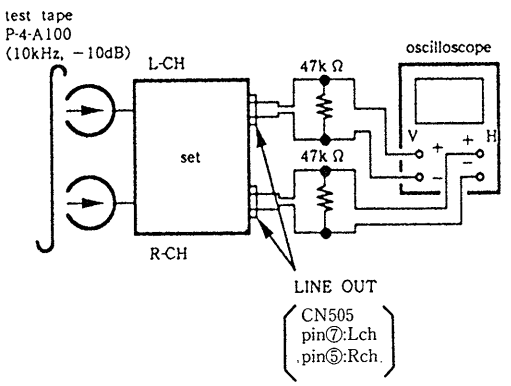
1. Mode: FWD playback

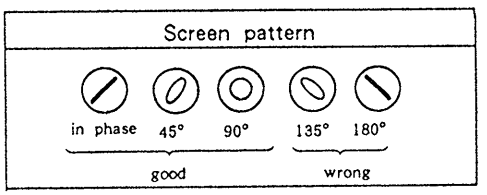


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



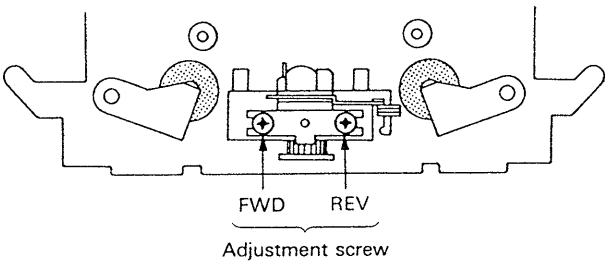
3. Phase Check
   Mode: playback





4. Set in the REV mode and repeat the step 1-3.
5. After the adjustment, lock the screws with locking compound.

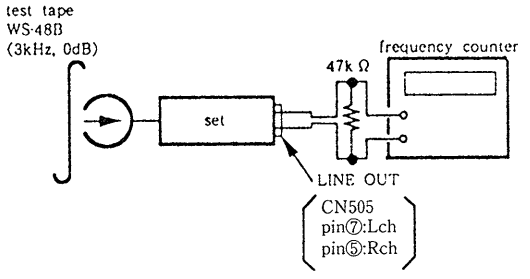
Adjustment Location : Record/playback head



Tape Speed Adjustment DECK A DECK B

Procedure :

Mode: playback



Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

1. Continue pressing the SYNCHRO DUBBING HIGH SPEED switch.
2. Check that frequency counter reading is within the standard value 6,000±30Hz.
3. If out of the standard, adjust each RV72 so that the frequency counter reading satisfies 6,000±30Hz on both A and B decks.
4. Change over to REV playback status, and repeat the above steps 1 to 3.

(Normal speed adjustment)

1. Continue pressing the SYNCHRO DUBBING NORM SPEED switch.
2. Check that the frequency counter reading is within the standard value 3,000±30Hz.
3. If out of the standard, adjust each RV71 so that the frequency counter reading satisfies 3,000±30Hz on both A and B decks.
4. Change over to REV playback status, and repeat the above steps 1 to 3.

Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

Adjustment Location :

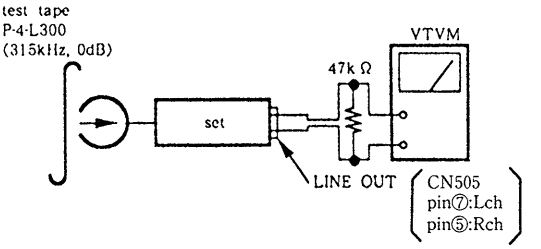
MD(A), MD(D) board

Playback Level Adjustment

DECK A DECK B

Procedure :

Mode: playback



Adjust RV11 (L-CH), RV21 (R-CH) so that the reading on VTVM meets the adjustment limits below.

Adjustment Limits :

LINE OUT level: −5±0.5dB (0.42−0.46V)

Level difference between channels: less than 0.5dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : MD(A), MD(D) board

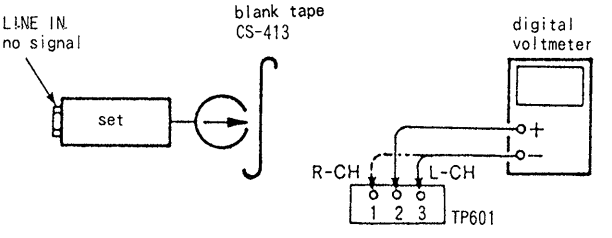
Record Bias Adjustment DECK B

Setting :

REC LEVEL control: Standard Record (See page 6.)

Procedure :

Mode: record



1. Connect the digital voltmeter to test point TP601.
2. Set RV301(L-CH) and RV401(R-CH) to mechanical center.
3. Set to FWD record mode.
4. Adjust T301(L-CH) and T401(R-CH) so that the digital voltmeter reading becomes minimum.

Adjustment Location : HX PRO board

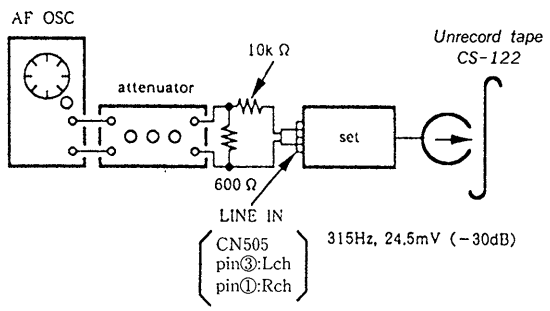
Record Level Adjustment DECK B

Setting :

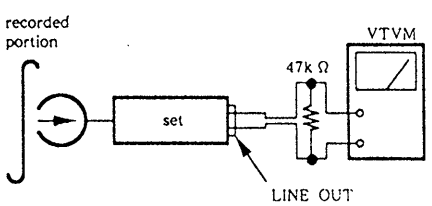
REC LEVEL control: Standard Record (See page 6.)

Procedure :

1. Mode: record



2. Mode: playback



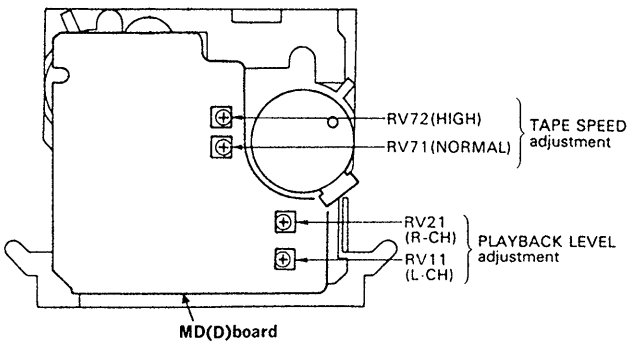
3. Playback the signal recorded in step 1.
   Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV101 (L-CH), RV 201 (R-CH) and repeat the step1-2.

Adjustment Limits : −25dB±0.5dB (42−46mV)

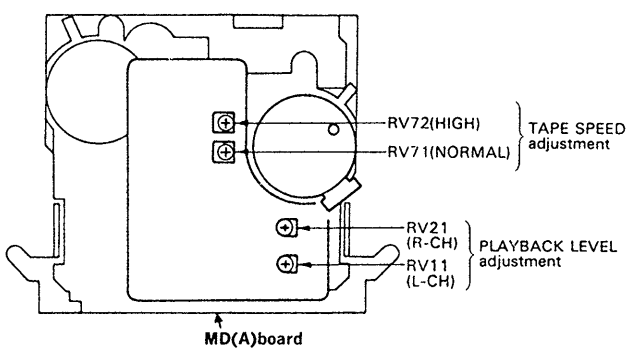
Adjustment Location : MAIN board (component side)

−Adjustment Parts Location Diagrams−

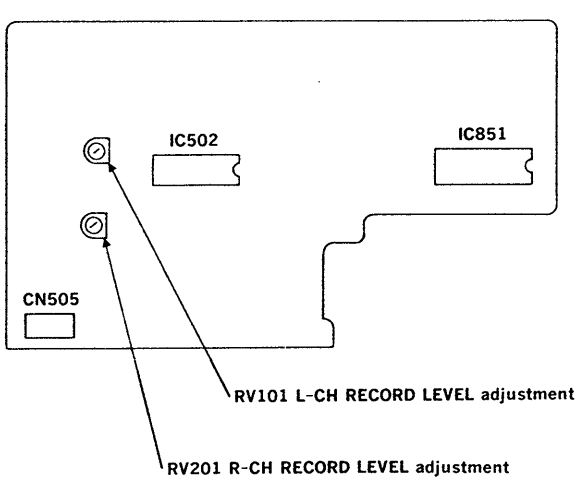
B DECK



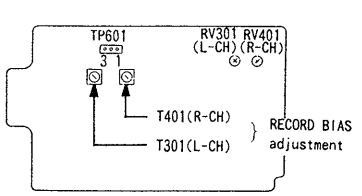
A DECK



MAIN BOARD(COMPONENT SIDE)



HX PRO BOARD(COMPONENT SIDE)



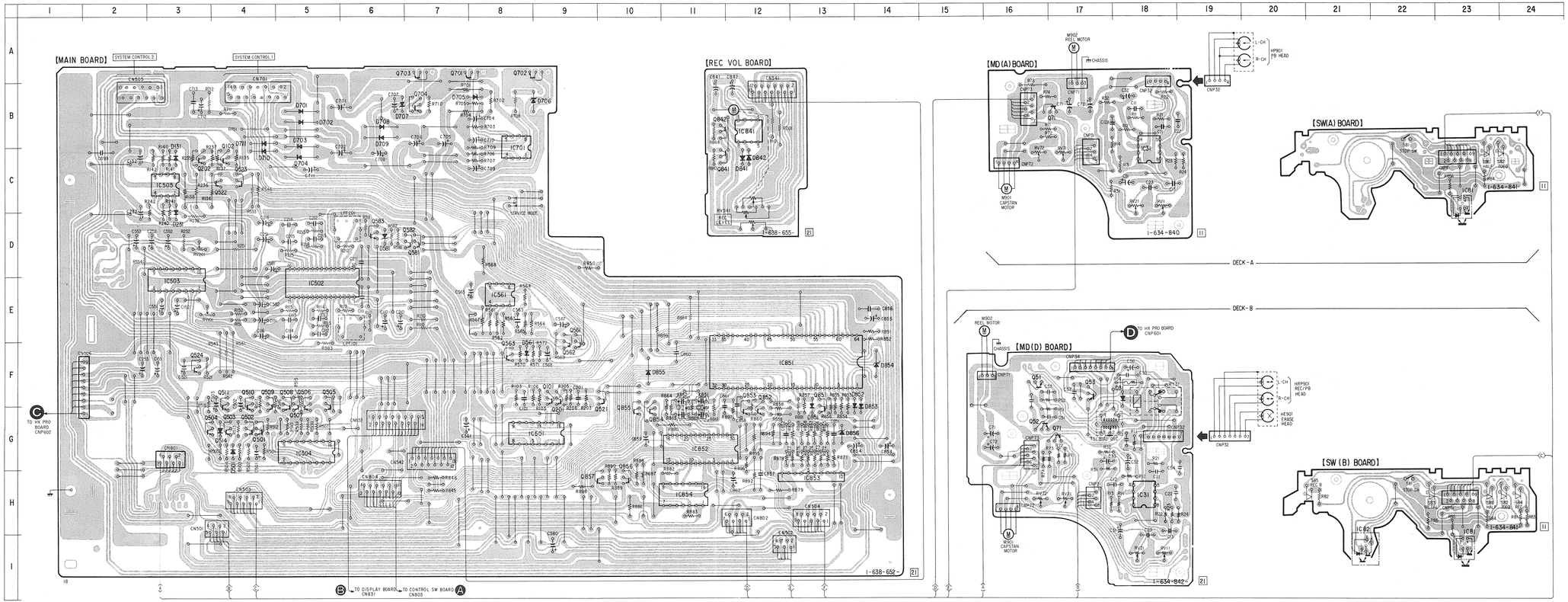
SECTION 5
DIAGRAMS

● SEMICONDUCTOR LOCATION

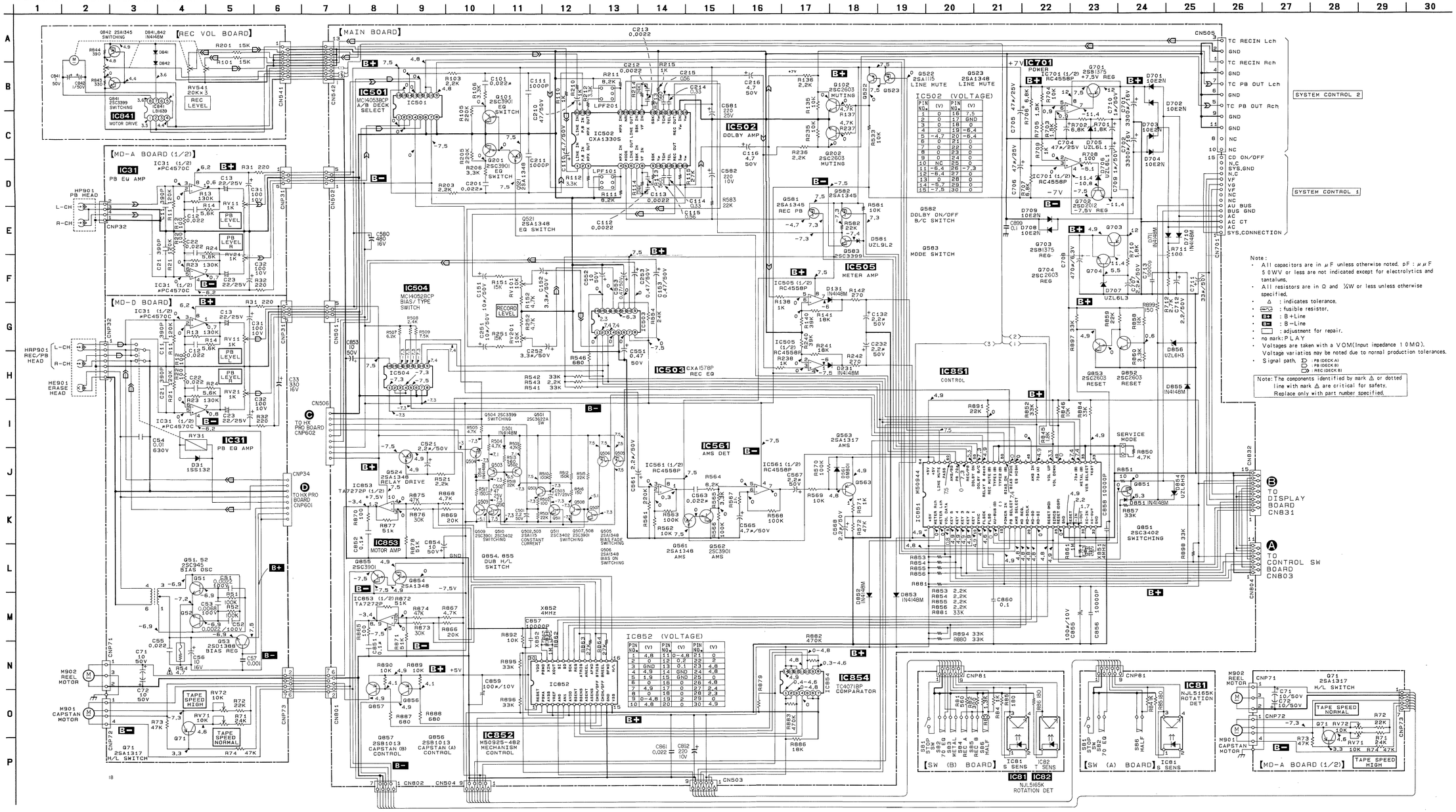
Ref. No.	Location	Ref. No.	Location
D31	F-18	Q51	F-16
D131	C-3	Q52	G-16
D231	D-3	Q53	F-17
D501	G-4	Q71 (MD(A))	B-17
D514	G-4	Q71 (MD(D))	G-17
D561	F-8	Q101	F-9
D581	D-6	Q102	C-4
D701	B-5	Q201	F-9
D702	B-5	Q202	C-3
D703	B-5	Q501	G-4
D704	C-5	Q502	G-4
D705	B-8	Q503	G-4
D706	B-9	Q504	G-3
D707	B-6	Q505	F-5
D708	B-6	Q506	F-5
D709	B-6	Q507	F-5
D710	C-4	Q508	F-5
D711	B-4	Q509	F-4
D841	C-12	Q510	F-4
D842	C-12	Q511	F-4
D851	G-13	Q521	F-10
D852	F-14	Q522	C-4
D853	G-14	Q523	C-4
D854	F-14	Q524	F-3
D855	F-10	Q561	E-9
D856	G-13	Q562	F-9
		Q563	F-8
IC31 (MD(A))	C-18	Q581	D-7
IC31 (MD(D))	H-18	Q582	D-7
IC81 (SW(A))	C-23	Q583	D-6
IC81 (SW(B))	I-23	Q701	A-7
IC501	G-9	Q702	A-8
IC502	E-5	Q703	A-7
IC503	E-3	Q704	B-7
IC504	G-5	Q841	C-12
IC505	C-3	Q842	B-11
IC561	E-8	Q851	F-13
IC701	B-8	Q852	G-12
IC841	B-12	Q853	G-12
IC851	F-12	Q854	G-10
IC852	G-11	Q855	G-10
IC853	H-13	Q856	H-10
IC854	H-11	Q857	H-9

· o—— : parts extracted from the component side.

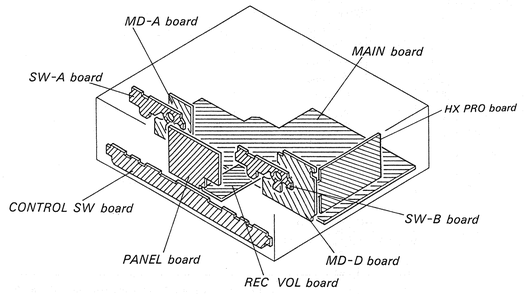
5-1. PRINTED WIRING BOARDS —Main Section—



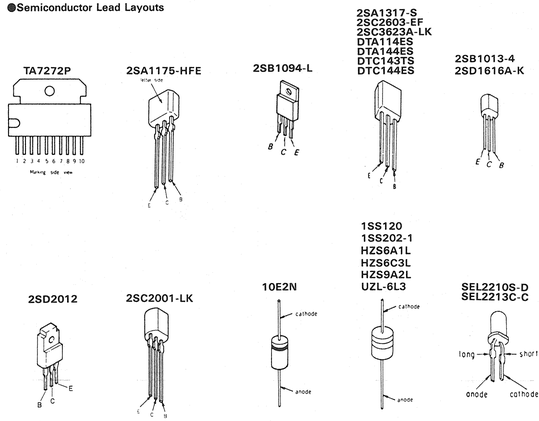
5-2. SCHEMATIC DIAGRAM —Main Section—


【REC VOL BOARD】
【MAIN BOARD】
【MD-A BOARD (1/2)】
【MD-D BOARD】
IC501 MC14053BCP A/B DECK SELECT
IC502 CXA1330S DOLBY AMP
IC504 MC14052BCP BIAS/TYPE SWITCH
IC505 METER AMP
IC503 CXA1578P REC EQ
IC561 AMS DET
IC851 CONTROL
IC701 POWER
IC31 PB EQ AMP
IC841 MOTOR DRIVE
IC853 MOTOR AMP
IC852 M59925-482 MECHANISM CONTROL
IC854 TC4071BP COMPARATOR
IC81 NJL5165K ROTATION DET
IC82 NJL5165K ROTATION DET
IC852 (VOLTAGE)
IC502 (VOLTAGE)
SYSTEM CONTROL 2
SYSTEM CONTROL 1
TC RECIN Lch
TC RECIN Rch
TC PB OUT Lch
TC PB OUT Rch
CD ON/OFF
SYS.GND
SYS.CONNECTION
AU BUS
BUS GND
TO DISPLAY BOARD CN831
TO CONTROL SW BOARD CN803
TO HP PRO BOARD CNP602
TO HP PRO BOARD CNP601
【SW (B) BOARD】
【SW (A) BOARD】
【MD-A BOARD (1/2)】
Note:
All capacitors are in μF unless otherwise noted. pF : μμF
50WV or less are not indicated except for electrolytics and tantalums.
All resistors are in Ω and ¼W or less unless otherwise specified.
△ : indicates tolerance.
: fusible resistor.
: B+Line
: B−Line
: adjustment for repair.
no mark: PLAY
Voltages are taken with a VOM(Input impedance 10MΩ).
Voltage variations may be noted due to normal production tolerances.
Signal path. : PB (DECK A) : PB (DECK B) : REC (DECK B)
Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

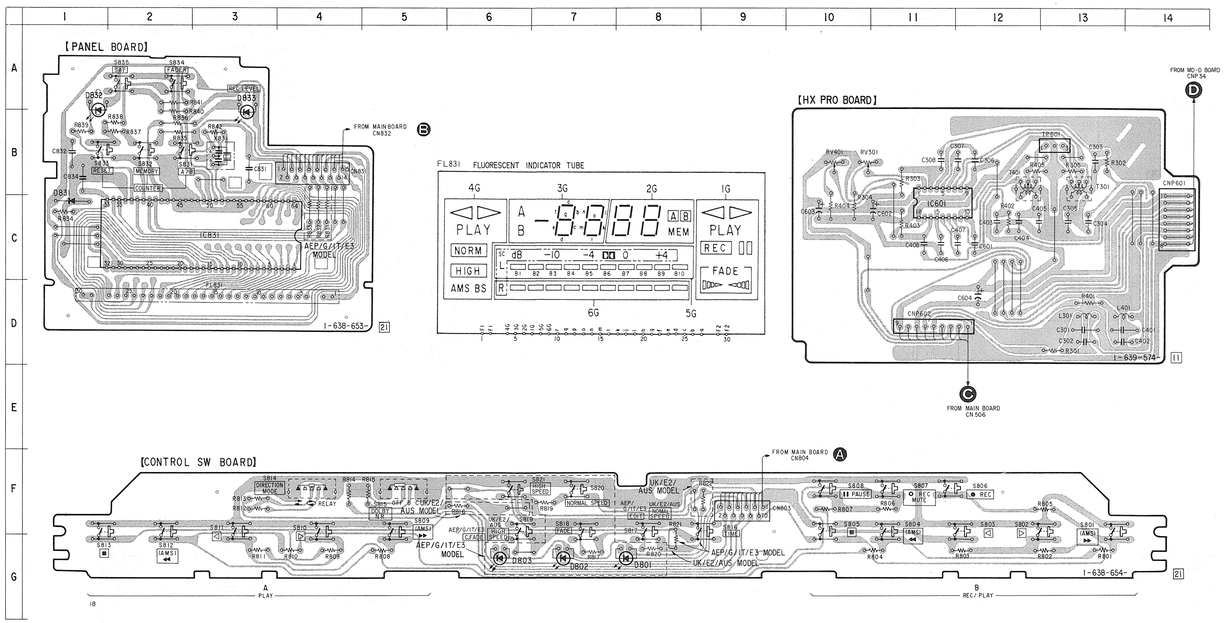
5-3. CIRCUIT BOARDS LOCATION



●Semiconductor Lead Layouts



5-4. PRINTED WIRING BOARDS —Panel Section—



● SEMICONDUCTOR LOCATION

Ref.No.	Location	Ref.No.	Location
D801	G-8	D833	A-3
D802	G-7		
D803	G-6	IC601	C-11
D831	C-1	IC831	C-3
D832	A-1		

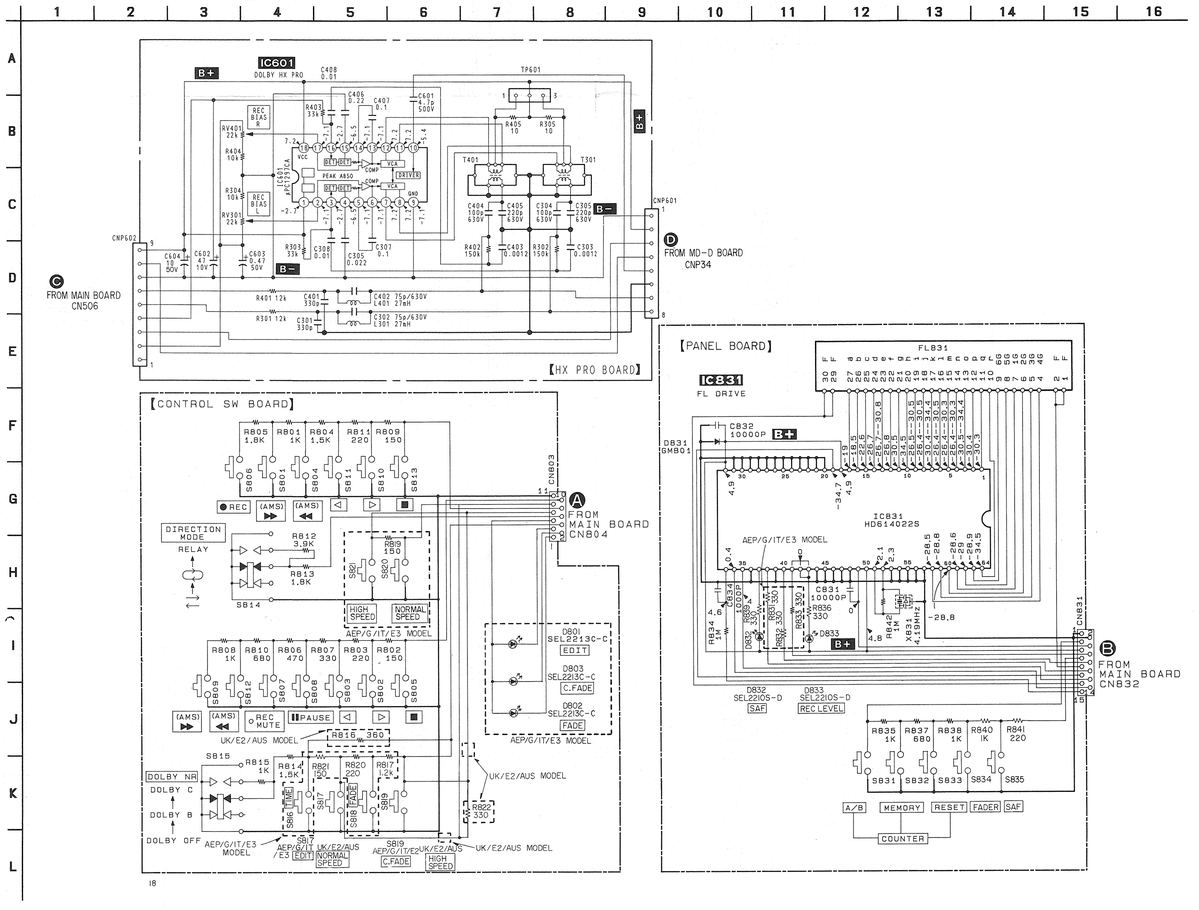
- ⟷ : parts extracted from the component side.

G:Germany
IT:Italian
AUS:Australian

5-5. SCHEMATIC DIAGRAM —Panel Section—

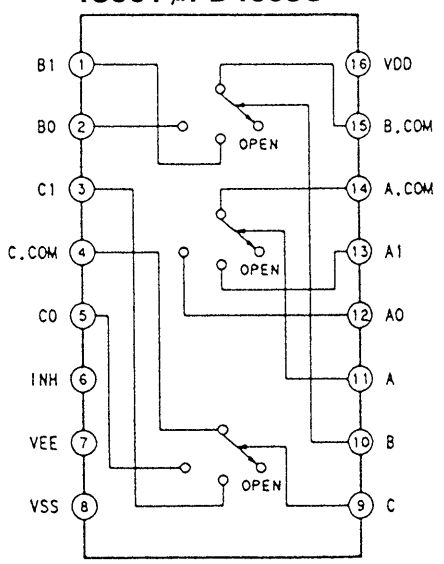
Note:
- All capacitors are in μF unless otherwise noted. pF : μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : indicates tolerance.
- B+ : B+Line
- Voltage is dc with respect to ground under no-signal(detuned) conditions.
- no mark:PLAY
- Voltages are taken with a VOM(Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

G:Germany
IT:Italian
AUS:Australian

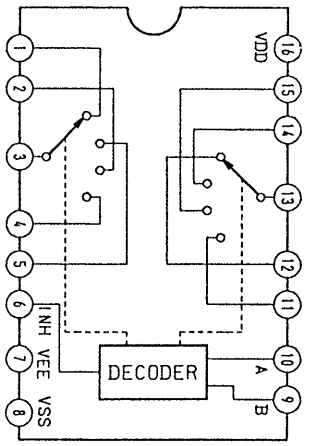


● IC Block Diagrams

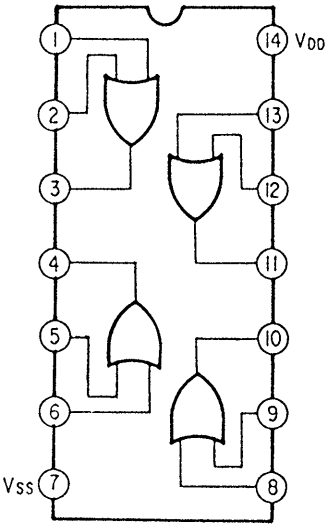
IC501 μPD4053C



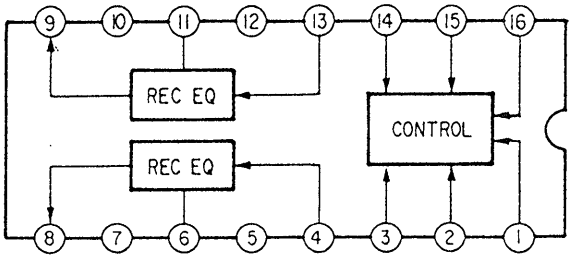
IC504 TC4052BPHB



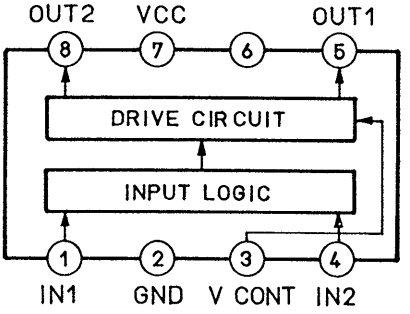
IC854 TC4071BP



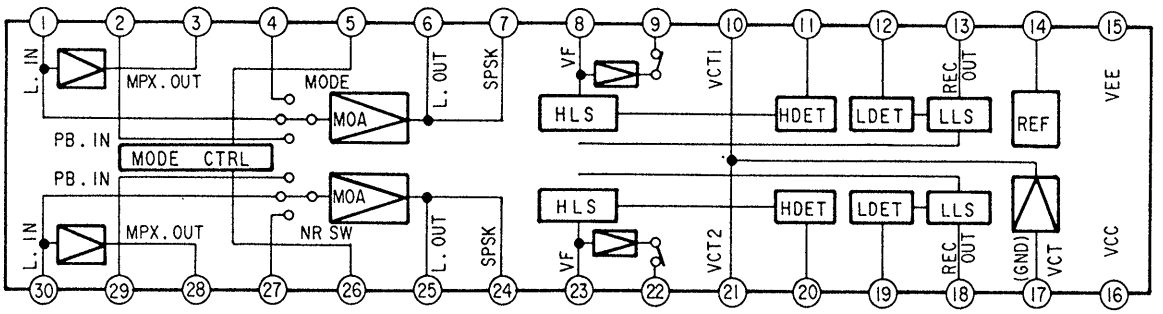
IC503 CXA1578P



IC841 LB1639



IC502 CXA1330S



SECTION 6
EXPLODED VIEWS

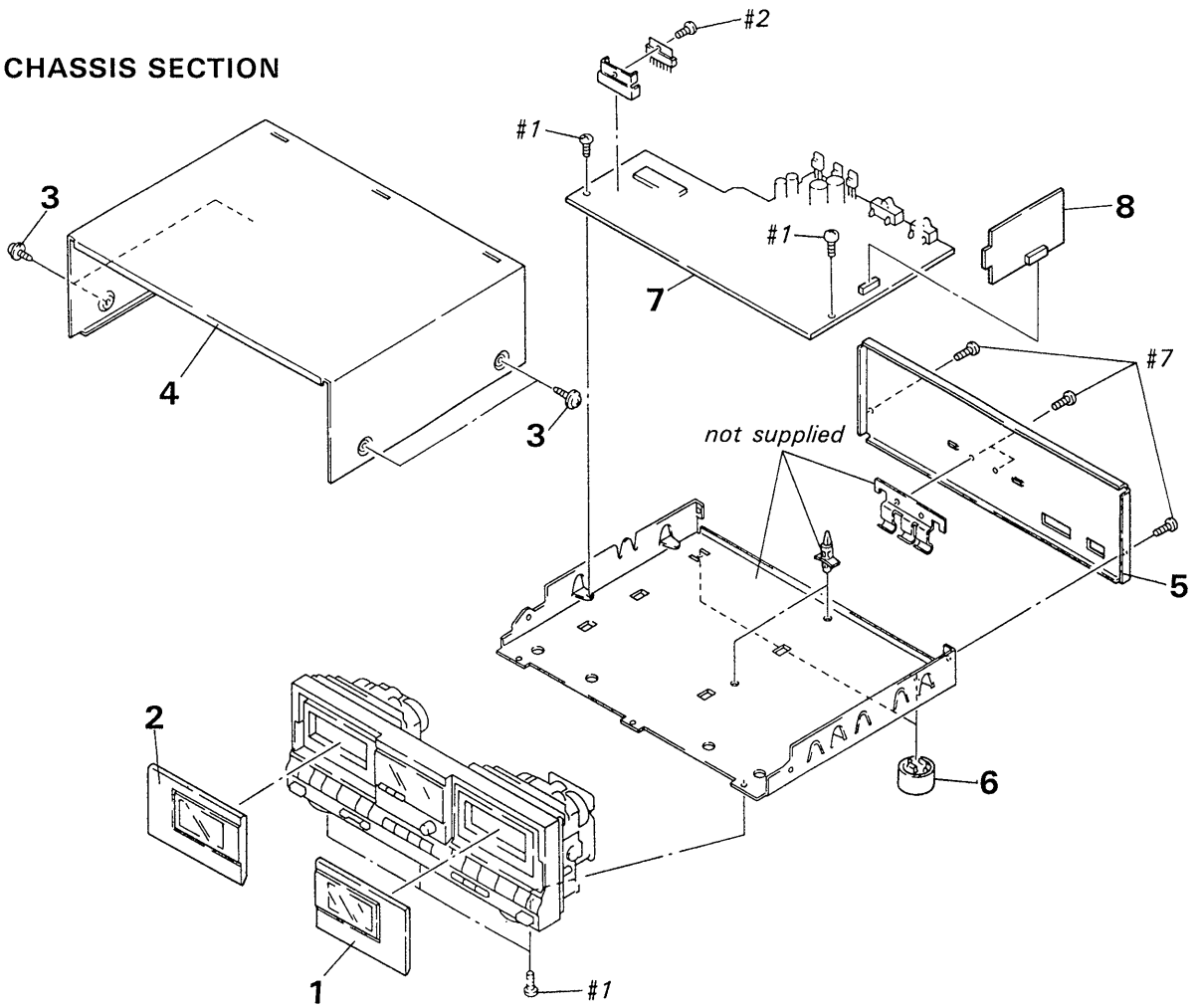
NOTE:

- −XX, −X mean standardized parts, so they may have some differences from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE(WHITE)...(RED)
  ↑ ↑
  Part's Color Cabinet's Color
- Hardware (#mark) list is given in the last of this parts list.

G:Germany
IT:Italian
AUS:Australian

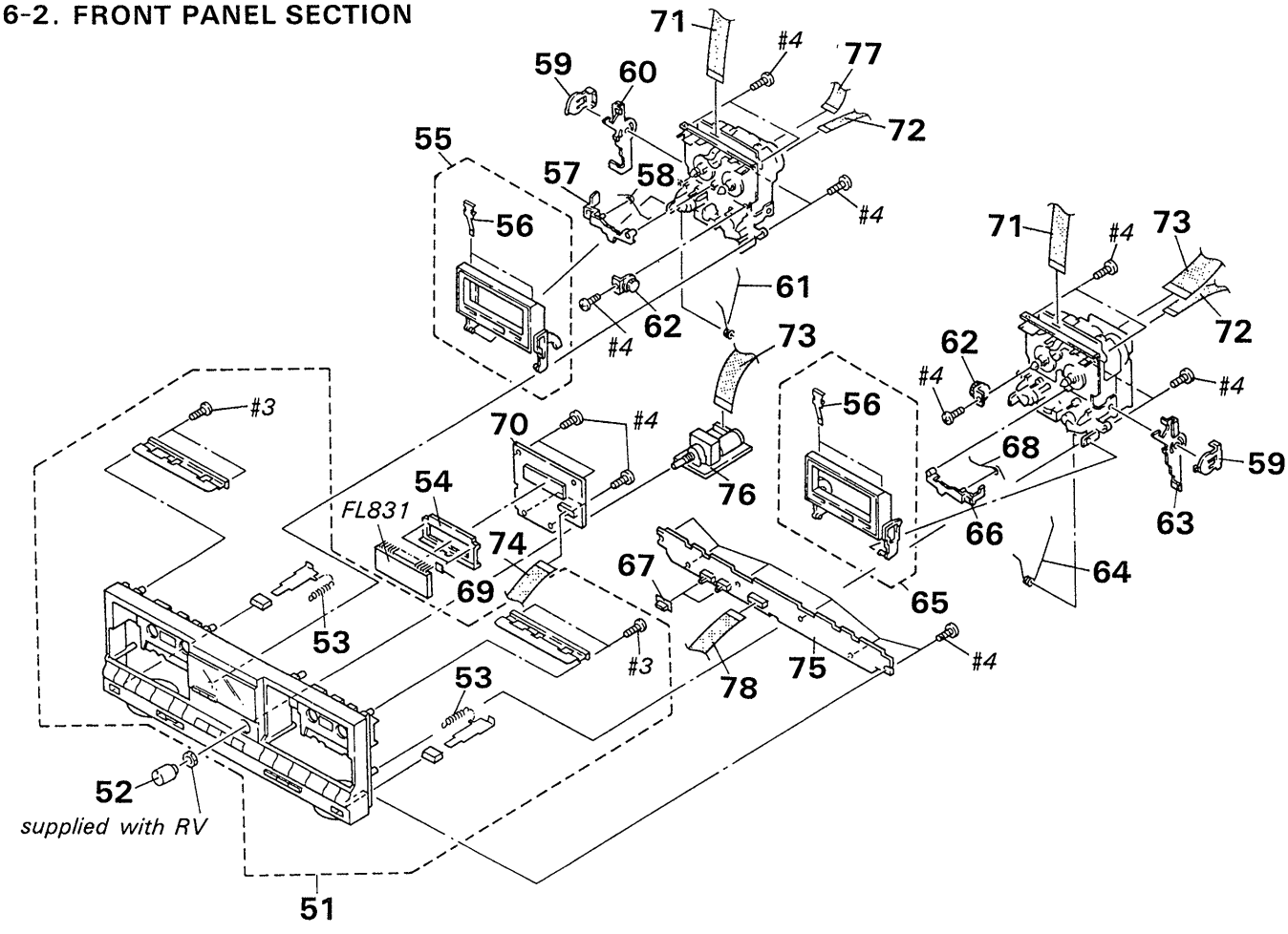
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. CHASSIS SECTION



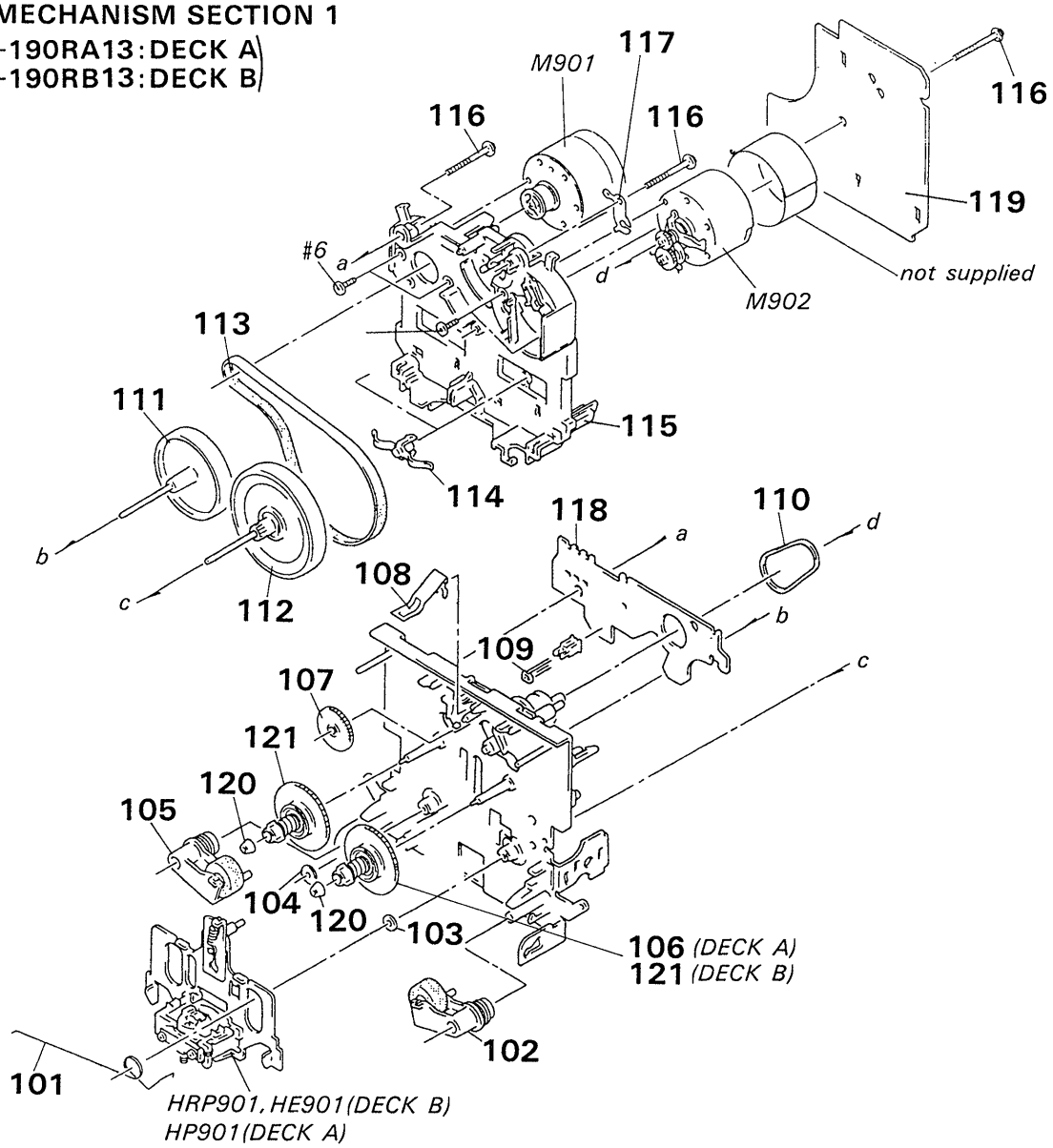
Ref. No.	Part No.	Description	Remark
1	X-3363-132-1	LID (B) ASSY, CASSETTE (except IT)	
1	X-3363-133-1	LID (B) ASSY, CASSETTE (IT)	
2	X-3362-226-1	LID (A) ASSY, CASSETTE (except IT)	
2	X-3362-797-1	LID (A) ASSY, CASSETTE (IT)	
3	3-363-099-01	SCREW (CASE +3X8 TP2)	
4	* 4-939-803-71	CASE	
5	* 3-362-787-33	PANEL, BACK (G)	
5	* 3-362-787-42	PANEL, BACK (AEP, IT, UK)	
5	* 3-362-787-41	PANEL, BACK (E2, E3, AUS)	
6	4-931-169-01	FOOT	
7	* A-2006-519-A	MAIN BOARD, COMPLETE (UK, E2, AUS)	
7	* A-2006-524-A	MAIN BOARD, COMPLETE (AEP, G, IT, E3)	
8	* A-2006-523-A	HX PRO BOARD, COMPLETE	

6-2. FRONT PANEL SECTION



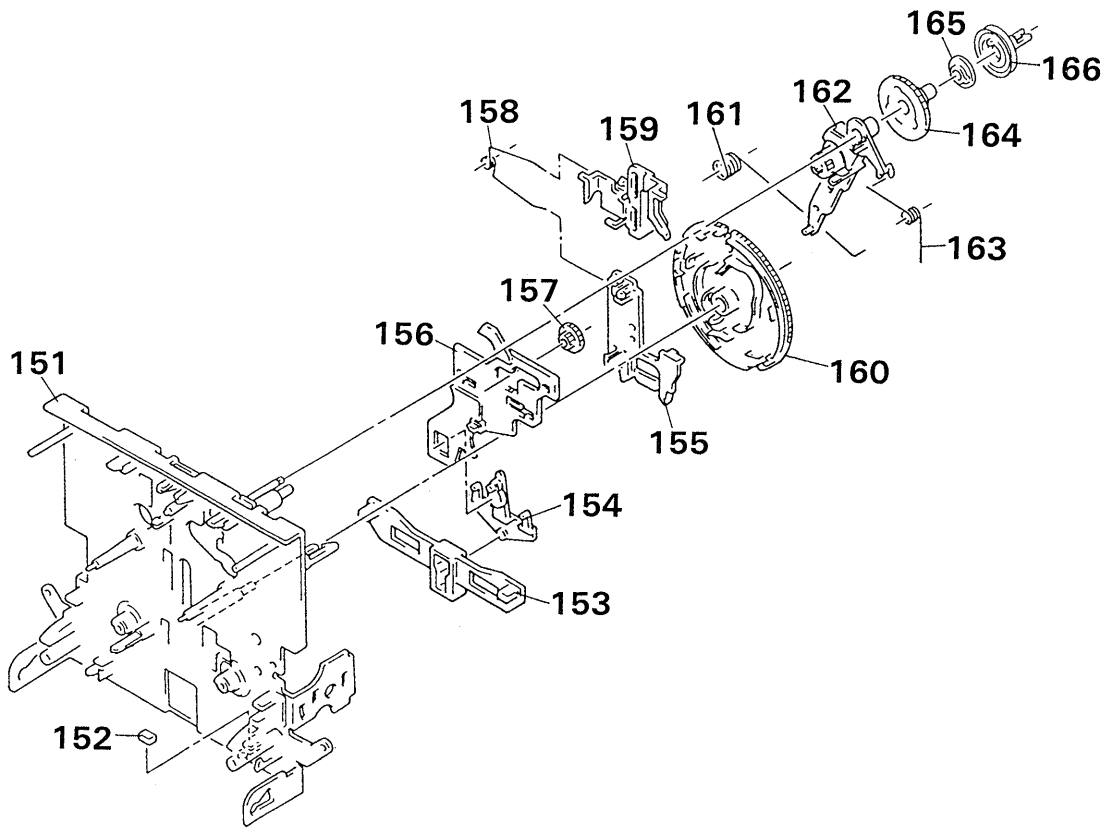
Ref. No.	Part No.	Description	Remark
51	X-3363-131-2	PANEL ASSY, FRONT (UK, E2, AUS)	
51	X-3363-134-2	PANEL ASSY, FRONT (AEP, G, E3)	
51	X-3363-135-2	PANEL ASSY, FRONT (IT)	
52	3-349-039-01	KNOB (VOL)	
53	3-662-752-21	SPRING, TENSION	
54	* 4-933-646-01	HOLDER (TC), FL TUBE	
55	X-3340-194-1	HOLDER (L) ASSY, CASSETTE	
56	3-308-823-11	SPRING	
57	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
58	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
59	3-354-957-01	JOINT (LOCK LEVER)	
60	* 3-363-638-01	LEVER (LOCK LEVER L)	
61	3-354-959-01	SPRING (LOADING L), TORSION	
62	3-354-963-01	DAMPER	
63	* 3-363-639-01	LEVER (LOCK LEVER R)	
64	3-354-960-01	SPRING (LOADING R), TORSION	
65	X-3340-195-1	HOLDER (R) ASSY, CASSETTE	
66	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
67	3-363-640-01	KNOB (SLIDE)	
68	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
69	* 4-921-941-01	CUSHION (FL)	
70	* A-2006-520-A	PANEL BOARD, COMPLETE (UK, E2, AUS)	
70	* A-2006-525-A	PANEL BOARD, COMPLETE (AEP, G, IT, E3)	
71	* 1-574-727-11	WIRE, FLAT TYPE (9 CORE)	
72	1-575-220-11	WIRE, FLAT TYPE (5 CORE)	
73	1-590-036-11	WIRE, FLAT TYPE (13 CORE)	
74	1-575-217-11	WIRE, FLAT TYPE (15 CORE)	
75	* 1-638-654-21	CONTROL SW BOARD	
76	* 1-638-655-21	REC VOL BOARD	
77	1-575-731-11	WIRE, FLAT TYPE (7 CORE)	
78	1-590-218-11	WIRE, FLAT TYPE (11 CORE)	
FL831	1-519-570-11	INDICATOR TUBE, FLUORESCENT	

6-3. MECHANISM SECTION 1
(TCM-190RA13:DECK A)
(TCM-190RB13:DECK B)



Ref. No.	Part No.	Description	Remark
101	3-359-455-01	SPRING, TORSION	
102	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	
103	3-356-713-01	WASHER	
104	3-356-714-01	WASHER	
105	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	
106	X-3359-404-1	TABLE ASSY, REEL (DECK A)	
107	3-359-424-01	GEAR (REV GEAR)	
108	3-359-430-01	SPRING (CASSETTE RETAINER), LEAF	
109	3-343-419-01	HOLDER (S SENSER A)	
110	3-359-466-01	BELT (FR), SQUARE	
111	X-3359-410-1	FLYWHEEL (REV) ASSY	
112	X-3359-406-1	FLYWHEEL (FWD) COMPLETE ASSY	
113	3-359-417-01	BELT (FLAT), CAPSTAN	
114	3-575-321-00	RETAINER, THRUST, CAPSTAN	
115	* 3-359-436-01	BASE (THRUST RETAINER), FITTING	
116	3-359-414-01	SCREW (+PTPWH 2X23)	
117	3-359-450-01	PLATE, GROUND	
118	* 1-634-841-11	SW-A BOARD	
118	* 1-634-841-11	SW-B BOARD	
119	* A-2006-305-A	MD-D BOARD, COMPLETE (DECK B)	
119	* 1-634-840-11	MD-A BOARD (DECK A)	
120	3-362-308-01	CAP (REEL)	
121	X-3362-078-1	TABLE ASSY (B), REEL	
HP901	A-2003-867-B	BASE ASSY, HEAD (DECK A)	
HRP901, HE901	A-2003-477-A	BASE ASSY, HEAD (DECK B)	
M901	X-3359-417-1	MOTOR (CAPSTAN) ASSY	
M902	A-2003-474-A	MOTOR (REEL) ASSY	

6-4. MECHANISM SECTION 2



Ref. No.	Part No.	Description	Remark
151	X-3359-415-1	CHASSIS ASSY, MECHANICAL	
152	3-359-469-01	SPACER	
153	* 3-359-425-01	SLIDER (REVERSE SLIDER)	
154	3-359-426-01	LEVER (REVERSE LEVER)	
155	* 3-359-427-01	SLIDER (LEVERSE SLIDER)	
156	* 3-359-415-01	SLIDER (TRIGGER SLIDER)	
157	3-359-448-01	GEAR (TRIGGER)	
158	3-359-454-01	SPRING, TORSION	
159	3-359-429-01	SLIDER (BRAKE PLATE)	
160	3-359-420-01	GEAR (CAM GEAR)	
161	3-359-456-01	SPRING(TRIGGER SPRING), TORSION	
162	X-3359-405-1	LEVER (FR ARM) ASSY	
163	3-359-453-01	SPRING (FR ARM), TORSION	
164	3-359-419-01	GEAR (FR GEAR)	
165	3-359-421-01	CLUTCH (REEL DISK)	
166	3-359-418-01	PULLEY (FR PULLEY)	

HX PRO

SECTION 7
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms

METAL : Metal-film resistor
METAL OXIDE : Metal Oxide-film resistor
F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA··· : μA···, uPA··· : μPA···,
  uPB··· : μPB···, uPC··· : μPC···,
  uPD··· : μPD···
- CAPACITORS
  uF : μF
- COILS
  uH : μH

G:Germany
IT:Italian
AUS:Australian

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description			Remark
*	A-2006-523-A	HX PRO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C301	1-162-288-31	CERAMIC	330PF	10% 50V	
C302	1-136-273-91	FILM	75PF	5% 630V	
C303	1-130-472-00	MYLAR	0.0012uF	5% 50V	
C304	1-136-433-11	FILM	100PF	5% 630V	
C305	1-136-437-11	FILM	220PF	5% 630V	
C306	1-136-157-00	FILM	0.022uF	5% 50V	
C307	1-136-165-00	FILM	0.1uF	5% 50V	
C308	1-136-153-00	FILM	0.01uF	5% 50V	
C401	1-162-288-31	CERAMIC	330PF	10% 50V	
C402	1-136-273-91	FILM	75PF	5% 630V	
C403	1-130-472-00	MYLAR	0.0012uF	5% 50V	
C404	1-136-433-11	FILM	100PF	5% 630V	
C405	1-136-437-11	FILM	220PF	5% 630V	
C406	1-136-157-00	FILM	0.022uF	5% 50V	
C407	1-136-165-00	FILM	0.1uF	5% 50V	
C408	1-136-153-00	FILM	0.01uF	5% 50V	
C601	1-107-046-00	MICA	4.7PF	500V	
C602	1-126-022-11	ELECT	47uF	20% 10V	
C603	1-126-300-11	ELECT	0.47uF	20% 50V	
C604	1-126-059-11	ELECT	10uF	20% 50V	
		< CONNECTOR >			
CNP601	* 1-565-347-11	SOCKET, CONNECTOR (PC BOARD) 8P			
CNP602	* 1-569-504-11	PIN, CONNECTOR 9P			
		< IC >			
IC601	8-759-106-56	IC uPC1297CA			
		< COIL >			
L301	1-410-780-11	INDUCTOR	27mH		
L401	1-410-780-11	INDUCTOR	27mH		
		< RESISTOR >			
R301	1-249-430-11	CARBON	12K	5% 1/4W	
R302	1-247-883-00	CARBON	150K	5% 1/4W	
R303	1-249-435-11	CARBON	33K	5% 1/4W	
R304	1-249-429-11	CARBON	10K	5% 1/4W	
R305	1-249-393-11	CARBON	10	5% 1/4W	
R401	1-249-430-11	CARBON	12K	5% 1/4W	
R402	1-247-883-00	CARBON	150K	5% 1/4W	
R403	1-249-435-11	CARBON	33K	5% 1/4W	
R404	1-249-429-11	CARBON	10K	5% 1/4W	
R405	1-249-393-11	CARBON	10	5% 1/4W	
		< VARIABLE RESISTOR >			
RV301	1-238-601-11	RES, ADJ, CARBON 22K			
RV401	1-238-601-11	RES, ADJ, CARBON 22K			
		< TRANSFORMER >			
T301	1-433-367-11	TRANSFORMER, BIAS OSSCILATION			
T401	1-433-367-11	TRANSFORMER, BIAS OSSCILATION			
		< TEST PIN >			
TP601	* 1-564-518-11	PLUG, CONNECTOR 3P			

MAIN PANEL CONTROL SW REC VOL

Ref. No.	Part No.	Description			Remark
	* A-2006-519-A	MAIN BOARD, COMPLETE (UK, E2, AUS)			
	* A-2006-524-A	MAIN BOARD, COMPLETE (AEP, G, IT, E3)			
		**********			
	* A-2006-520-A	PANEL BOARD, COMPLETE (UK, E2, AUS)			
	* A-2006-525-A	PANEL BOARD, COMPLETE (AEP, G, IT, E3)			
		**********			
	* 1-638-654-21	CONTROL SW BOARD			
		**********			
	* 1-638-655-21	REC VOL BOARD			
		**********			
	* 3-362-478-01	HOLDER (T), LED			
	* 4-921-941-01	CUSHION (FL)			
	* 4-933-646-01	HOLDER (TC), FL TUBE			
	* 4-942-204-01	PLATE, GROUND			
	7-682-547-04	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C101	1-136-157-00	FILM	0.022uF	5%	50V
C110	1-126-163-11	ELECT	4.7uF	20%	50V
C111	1-162-294-31	CERAMIC	0.001uF	10%	50V
C112	1-130-475-00	MYLAR	0.0022uF	5%	50V
C113	1-130-475-00	MYLAR	0.0022uF	5%	50V
C114	1-136-171-00	FILM	0.33uF	5%	50V
C115	1-136-174-00	FILM	0.56uF	5%	50V
C116	1-126-163-11	ELECT	4.7uF	20%	50V
C132	1-126-161-11	ELECT	2.2uF	20%	50V
C151	1-126-059-11	ELECT	10uF	20%	50V
C152	1-126-162-11	ELECT	3.3uF	20%	50V
C153	1-126-059-11	ELECT	10uF	20%	50V
C201	1-136-157-00	FILM	0.022uF	5%	50V
C210	1-126-163-11	ELECT	4.7uF	20%	50V
C211	1-162-294-31	CERAMIC	0.001uF	10%	50V
C212	1-130-475-00	MYLAR	0.0022uF	5%	50V
C213	1-130-475-00	MYLAR	0.0022uF	5%	50V
C214	1-136-171-00	FILM	0.33uF	5%	50V
C215	1-136-174-00	FILM	0.56uF	5%	50V
C216	1-126-163-11	ELECT	4.7uF	20%	50V
C232	1-126-161-11	ELECT	2.2uF	20%	50V
C251	1-126-059-11	ELECT	10uF	20%	50V
C252	1-126-162-11	ELECT	3.3uF	20%	50V
C253	1-126-059-11	ELECT	10uF	20%	50V
C501	1-126-161-11	ELECT	2.2uF	20%	50V
C502	1-124-910-11	ELECT	47uF	20%	50V
C503	1-124-910-11	ELECT	47uF	20%	50V
C521	1-126-161-11	ELECT	2.2uF	20%	50V
C551	1-126-300-11	ELECT	0.47uF	20%	50V
C552	1-126-059-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description			Remark
C553	1-126-300-11	ELECT	0.47uF	20%	50V
C561	1-126-161-11	ELECT	2.2uF	20%	50V
C563	1-136-157-00	FILM	0.022uF	5%	50V
C565	1-126-163-11	ELECT	4.7uF	20%	50V
C567	1-126-161-11	ELECT	2.2uF	20%	50V
C568	1-126-161-11	ELECT	2.2uF	20%	50V
C580	1-123-323-00	ELECT	470uF	20%	16V
C581	1-126-024-11	ELECT	100uF	20%	25V
C582	1-126-024-11	ELECT	100uF	20%	25V
C701	1-124-887-00	ELECT	3300uF	20%	16V
C702	1-124-887-00	ELECT	3300uF	20%	16V
C704	1-124-910-11	ELECT	47uF	20%	50V
C705	1-124-910-11	ELECT	47uF	20%	50V
C706	1-124-910-11	ELECT	47uF	20%	50V
C707	1-126-161-11	ELECT	2.2uF	20%	50V
C708	1-124-472-11	ELECT	470uF	20%	10V
C709	1-126-301-11	ELECT	1uF	20%	50V
C710	1-126-301-11	ELECT	1uF	20%	50V
C711	1-126-867-11	ELECT	33uF	20%	50V
C712	1-126-161-11	ELECT	2.2uF	20%	50V
C713	1-161-379-00	CERAMIC	0.01uF	20%	25V
C831	1-161-379-00	CERAMIC	0.01uF	20%	25V
C832	1-161-379-00	CERAMIC	0.01uF	20%	25V
C834	1-162-294-31	CERAMIC	0.001uF	10%	50V
C841	1-126-301-11	ELECT	1uF	20%	50V
C842	1-126-301-11	ELECT	1uF	20%	50V
C851	1-164-159-11	CERAMIC	0.1uF		50V
C852	1-164-159-11	CERAMIC	0.1uF		50V
C853	1-126-059-11	ELECT	10uF	20%	50V
C854	1-126-059-11	ELECT	10uF	20%	50V
C855	1-124-994-11	ELECT	100uF	20%	10V
C856	1-161-379-00	CERAMIC	0.01uF	20%	25V
C857	1-161-379-00	CERAMIC	0.01uF	20%	25V
C858	1-161-379-00	CERAMIC	0.01uF	20%	25V
C859	1-124-994-11	ELECT	100uF	20%	10V
C860	1-164-159-11	CERAMIC	0.1uF		50V
C861	1-136-157-00	FILM	0.022uF	5%	50V
C862	1-126-121-11	ELECT	220uF	20%	10V
C899	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN501	* 1-568-824-11	SOCKET, CONNECTOR 5P			
CN502	* 1-568-824-11	SOCKET, CONNECTOR 5P			
CN503	* 1-568-828-11	SOCKET, CONNECTOR 9P			
CN504	* 1-568-828-11	SOCKET, CONNECTOR 9P			
CN505	* 1-566-858-41	SOCKET, CONNECTOR 11P			
CN506	* 1-569-495-11	SOCKET, CONNECTOR 9P			
CN541	* 1-568-832-11	SOCKET, CONNECTOR 13P			
CN542	* 1-568-832-11	SOCKET, CONNECTOR 13P			

MAIN PANEL CONTROL SW REC VOL

Ref. No.	Part No.	Description	Remark
CN701	* 1-566-859-11	SOCKET, CONNECTOR 15P	
CN801	* 1-568-826-11	SOCKET, CONNECTOR 7P	
CN802	* 1-568-826-11	SOCKET, CONNECTOR 7P	
CN803	* 1-568-854-11	SOCKET, CONNECTOR 11P	
CN804	* 1-568-830-11	SOCKET, CONNECTOR 11P	
CN831	* 1-568-834-11	SOCKET, CONNECTOR 15P	
CN832	* 1-568-834-11	SOCKET, CONNECTOR 15P	
		< DIODE >	
D131	8-719-912-20	DIODE 1SS120	
D231	8-719-912-20	DIODE 1SS120	
D501	8-719-912-20	DIODE 1SS120	
D514	8-719-912-20	DIODE 1SS120	
D561	8-719-912-20	DIODE 1SS120	
D581	8-719-933-54	DIODE HZS9A2L	
D701	8-719-200-77	DIODE 10E2N	
D702	8-719-200-77	DIODE 10E2N	
D703	8-719-200-77	DIODE 10E2N	
D704	8-719-200-77	DIODE 10E2N	
D705	8-719-933-33	DIODE HZS6A1L	
D706	8-719-933-33	DIODE HZS6A1L	
D707	8-719-000-54	DIODE UZL-6L3	
D708	8-719-200-77	DIODE 10E2N	
D709	8-719-200-77	DIODE 10E2N	
D710	8-719-912-20	DIODE 1SS120	
D711	8-719-912-20	DIODE 1SS120	
D801	8-719-302-23	DIODE SEL2213C-C (AEP, G, IT, E3)	
D802	8-719-302-23	DIODE SEL2213C-C (AEP, G, IT, E3)	
D803	8-719-302-23	DIODE SEL2213C-C (AEP, G, IT, E3)	
D831	8-719-912-20	DIODE 1SS120	
D832	8-719-301-39	DIODE SEL2210S-D	
D833	8-719-301-39	DIODE SEL2210S-D	
D841	8-719-912-20	DIODE 1SS120	
D842	8-719-912-20	DIODE 1SS120	
D851	8-719-912-20	DIODE 1SS120	
D852	8-719-912-20	DIODE 1SS120	
D853	8-719-912-20	DIODE 1SS120	
D854	8-719-933-41	DIODE HZS6C3L	
D855	8-719-912-20	DIODE 1SS120	
D856	8-719-933-41	DIODE HZS6C3L	
		< FLUORESCENT INDICATOR >	
FL831	1-519-570-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC501	8-759-140-53	IC uPD4053BC	
IC502	8-752-036-34	IC CXA1330S	
IC503	8-752-055-61	IC CXA1578P	
IC504	8-759-208-08	IC TC4052BPHB	
IC505	8-759-945-58	IC RC4558P	
IC561	8-759-945-58	IC RC4558P	
IC701	8-759-945-58	IC RC4558P	
IC831	8-759-321-92	IC HD614022S	
IC841	8-759-820-62	IC LB1639	
IC851	8-759-635-43	IC M50944-164SP	
IC852	8-759-635-94	IC M50925SP-482SP	
IC853	8-759-207-05	IC TA7272P	
IC854	8-759-240-71	IC TC4071BP	
		< FILTER >	
LPF101	1-236-087-11	FILTER, LOW PASS	
LPF201	1-236-087-11	FILTER, LOW PASS	
		< TRANSISTOR >	
Q101	8-729-900-74	TRANSISTOR DTC143TS	
Q102	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q201	8-729-900-74	TRANSISTOR DTC143TS	
Q202	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q501	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q502	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q503	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q504	8-729-900-89	TRANSISTOR DTC144ES	
Q505	8-729-900-61	TRANSISTOR DTA114ES	
Q506	8-729-900-61	TRANSISTOR DTA114ES	
Q507	8-729-900-74	TRANSISTOR DTC143TS	
Q508	8-729-900-74	TRANSISTOR DTC143TS	
Q509	8-729-900-74	TRANSISTOR DTC143TS	
Q510	8-729-900-74	TRANSISTOR DTC143TS	
Q511	8-729-900-74	TRANSISTOR DTC143TS	
Q521	8-729-900-61	TRANSISTOR DTA114ES	
Q522	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q523	8-729-900-61	TRANSISTOR DTA114ES	
Q524	8-729-900-61	TRANSISTOR DTA114ES	
Q561	8-729-900-61	TRANSISTOR DTA114ES	
Q562	8-729-900-74	TRANSISTOR DTC143TS	
Q563	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q581	8-729-900-65	TRANSISTOR DTA144ES	
Q582	8-729-900-65	TRANSISTOR DTA144ES	
Q583	8-729-900-89	TRANSISTOR DTC144ES	
Q701	8-729-111-67	TRANSISTOR 2SB1094-L	
Q702	8-729-209-15	TRANSISTOR 2SD2012	
Q703	8-729-111-67	TRANSISTOR 2SB1094-L	
Q704	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q841	8-729-900-89	TRANSISTOR DTC144ES	
Q842	8-729-900-65	TRANSISTOR DTA144ES	
Q851	8-729-900-80	TRANSISTOR DTC114ES	
Q852	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q853	8-729-620-05	TRANSISTOR 2SC2603-EF	

MAIN PANEL CONTROL SW REC VOL

Ref. No.	Part No.	Description				Remark
Q854	8-729-900-61	TRANSISTOR DTA114ES				
Q855	8-729-900-74	TRANSISTOR DTC143TS				
Q856	8-729-801-84	TRANSISTOR 2SB1013-4				
Q857	8-729-801-84	TRANSISTOR 2SB1013-4				
		< RESISTOR >				
R101	1-249-435-11	CARBON	33K	5%	1/4W	
R103	1-249-421-11	CARBON	2.2K	5%	1/4W	
R105	1-247-887-00	CARBON	220K	5%	1/4W	
R106	1-249-423-11	CARBON	3.3K	5%	1/4W	
R110	1-249-417-11	CARBON	1K	5%	1/4W	
R111	1-249-428-11	CARBON	8.2K	5%	1/4W	
R112	1-249-423-11	CARBON	3.3K	5%	1/4W	
R113	1-249-414-11	CARBON	560	5%	1/4W	
R114	1-247-864-11	CARBON	24K	5%	1/4W	
R115	1-249-434-11	CARBON	27K	5%	1/4W	
R135	1-249-429-11	CARBON	10K	5%	1/4W	
R136	1-249-421-11	CARBON	2.2K	5%	1/4W	
R137	1-249-425-11	CARBON	4.7K	5%	1/4W	
R138	1-249-417-11	CARBON	1K	5%	1/4W	
R140	1-249-436-11	CARBON	39K	5%	1/4W	
R141	1-249-432-11	CARBON	18K	5%	1/4W	
R142	1-249-410-11	CARBON	270	5%	1/4W	
R151	1-249-431-11	CARBON	15K	5%	1/4W	
R152	1-249-425-11	CARBON	4.7K	5%	1/4W	
R201	1-249-435-11	CARBON	33K	5%	1/4W	
R203	1-249-421-11	CARBON	2.2K	5%	1/4W	
R205	1-247-887-00	CARBON	220K	5%	1/4W	
R206	1-249-423-11	CARBON	3.3K	5%	1/4W	
R210	1-249-417-11	CARBON	1K	5%	1/4W	
R211	1-249-428-11	CARBON	8.2K	5%	1/4W	
R212	1-249-423-11	CARBON	3.3K	5%	1/4W	
R213	1-249-414-11	CARBON	560	5%	1/4W	
R214	1-247-864-11	CARBON	24K	5%	1/4W	
R215	1-249-417-11	CARBON	1K	5%	1/4W	
R235	1-249-429-11	CARBON	10K	5%	1/4W	
R236	1-249-421-11	CARBON	2.2K	5%	1/4W	
R237	1-249-425-11	CARBON	4.7K	5%	1/4W	
R238	1-249-417-11	CARBON	1K	5%	1/4W	
R240	1-249-436-11	CARBON	39K	5%	1/4W	
R241	1-249-432-11	CARBON	18K	5%	1/4W	
R242	1-249-410-11	CARBON	270	5%	1/4W	
R251	1-249-431-11	CARBON	15K	5%	1/4W	
R252	1-249-425-11	CARBON	4.7K	5%	1/4W	
R501	1-249-433-11	CARBON	22K	5%	1/4W	
R502	1-249-405-11	CARBON	100	5%	1/4W	
R503	1-249-425-11	CARBON	4.7K	5%	1/4W	
R504	1-249-425-11	CARBON	4.7K	5%	1/4W	
R505	1-249-425-11	CARBON	4.7K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R507	1-247-850-11	CARBON	6.2K	5%	1/4W	
R508	1-247-840-00	CARBON	2.4K	5%	1/4W	
R509	1-247-852-11	CARBON	7.5K	5%	1/4W	
R510	1-249-441-11	CARBON	100K	5%	1/4W	
R512	1-247-883-00	CARBON	150K	5%	1/4W	
R513	1-249-414-11	CARBON	560	5%	1/4W	
R515	1-249-433-11	CARBON	22K	5%	1/4W	
R516	1-249-407-11	CARBON	150	5%	1/4W	
R517	1-249-407-11	CARBON	150	5%	1/4W	
R518	1-249-433-11	CARBON	22K	5%	1/4W	
R521	1-249-421-11	CARBON	2.2K	5%	1/4W	
R533	1-249-429-11	CARBON	10K	5%	1/4W	
R541	1-249-435-11	CARBON	33K	5%	1/4W	
R542	1-249-435-11	CARBON	33K	5%	1/4W	
R543	1-249-435-11	CARBON	33K	5%	1/4W	
R546	1-249-415-11	CARBON	680	5%	1/4W	
R554	1-247-864-11	CARBON	24K	5%	1/4W	
R561	1-247-887-00	CARBON	220K	5%	1/4W	
R562	1-249-429-11	CARBON	10K	5%	1/4W	
R563	1-249-441-11	CARBON	100K	5%	1/4W	
R564	1-249-428-11	CARBON	8.2K	5%	1/4W	
R565	1-249-423-11	CARBON	3.3K	5%	1/4W	
R566	1-249-441-11	CARBON	100K	5%	1/4W	
R567	1-249-417-11	CARBON	1K	5%	1/4W	
R568	1-249-441-11	CARBON	100K	5%	1/4W	
R569	1-249-429-11	CARBON	10K	5%	1/4W	
R570	1-249-441-11	CARBON	100K	5%	1/4W	
R571	1-249-417-11	CARBON	1K	5%	1/4W	
R572	1-249-437-11	CARBON	47K	5%	1/4W	
R581	1-249-433-11	CARBON	22K	5%	1/4W	
R582	1-249-433-11	CARBON	22K	5%	1/4W	
R583	1-249-433-11	CARBON	22K	5%	1/4W	
R701	1-249-420-11	CARBON	1.8K	5%	1/4W	
R702	1-249-427-11	CARBON	6.8K	5%	1/4W	
R703	1-249-419-11	CARBON	1.5K	5%	1/4W	
R704	1-249-429-11	CARBON	10K	5%	1/4W	
R705	1-249-419-11	CARBON	1.5K	5%	1/4W	
R706	1-249-427-11	CARBON	6.8K	5%	1/4W	
R707	1-249-427-11	CARBON	6.8K	5%	1/4W	
R708	1-249-405-11	CARBON	100	5%	1/4W	
R709	1-249-417-11	CARBON	1K	5%	1/4W	
R710	1-249-420-11	CARBON	1.8K	5%	1/4W	
R711	1-249-405-11	CARBON	100	5%	1/4W	
R712	1-249-422-11	CARBON	2.7K	5%	1/4W	
R801	1-249-417-11	CARBON	1K	5%	1/4W	
R802	1-249-407-11	CARBON	150	5%	1/4W	
R803	1-249-409-11	CARBON	220	5%	1/4W	
R804	1-249-419-11	CARBON	1.5K	5%	1/4W	
R805	1-249-420-11	CARBON	1.8K	5%	1/4W	

MAIN PANEL CONTROL SW REC VOL

Ref. No.	Part No.	Description			Remark
R806	1-249-413-11	CARBON	470	5%	1/4W
R807	1-249-411-11	CARBON	330	5%	1/4W
R808	1-249-417-11	CARBON	1K	5%	1/4W
R809	1-249-407-11	CARBON	150	5%	1/4W
R810	1-249-415-11	CARBON	680	5%	1/4W
R811	1-249-409-11	CARBON	220	5%	1/4W
R812	1-249-424-11	CARBON	3.9K	5%	1/4W
R813	1-249-420-11	CARBON	1.8K	5%	1/4W
R814	1-249-418-11	CARBON	1.2K	5%	1/4W
R815	1-249-417-11	CARBON	1K	5%	1/4W
R816	1-247-820-11	CARBON	360	5%	1/4W (UK, E2, AUS)
R817	1-249-418-11	CARBON	1.2K	5%	1/4W (AEP, G, IT, E3)
R819	1-249-407-11	CARBON	150	5%	1/4W (AEP, G, IT, E3)
R820	1-249-409-11	CARBON	220	5%	1/4W (AEP, G, IT, E3)
R821	1-249-407-11	CARBON	150	5%	1/4W (AEP, G, IT, E3)
R822	1-249-411-11	CARBON	330	5%	1/4W (UK, E2, AUS)
R831	1-249-411-11	CARBON	330	5%	1/4W (AEP, G, IT, E3)
R832	1-249-411-11	CARBON	330	5%	1/4W (AEP, G, IT, E3)
R833	1-249-411-11	CARBON	330	5%	1/4W (AEP, G, IT, E3)
R834	1-249-409-11	CARBON	220	5%	1/4W
R835	1-249-417-11	CARBON	1K	5%	1/4W
R836	1-249-411-11	CARBON	330	5%	1/4W
R837	1-249-415-11	CARBON	680	5%	1/4W
R838	1-249-413-11	CARBON	470	5%	1/4W
R839	1-249-411-11	CARBON	330	5%	1/4W
R840	1-249-411-11	CARBON	330	5%	1/4W
R841	1-249-409-11	CARBON	220	5%	1/4W
R842	1-247-903-00	CARBON	1M	5%	1/4W
R843	1-249-411-11	CARBON	330	5%	1/4W
R844	1-249-412-11	CARBON	390	5%	1/4W
R845	1-249-420-11	CARBON	1.8K	5%	1/4W
R846	1-249-429-11	CARBON	10K	5%	1/4W
R850	1-249-425-11	CARBON	4.7K	5%	1/4W
R851	1-249-393-11	CARBON	10	5%	1/4W
R852	1-249-435-11	CARBON	33K	5%	1/4W
R853	1-249-421-11	CARBON	2.2K	5%	1/4W
R854	1-249-421-11	CARBON	2.2K	5%	1/4W
R855	1-249-421-11	CARBON	2.2K	5%	1/4W
R856	1-249-421-11	CARBON	2.2K	5%	1/4W
R857	1-249-435-11	CARBON	33K	5%	1/4W
R858	1-247-860-11	CARBON	16K	5%	1/4W
R859	1-249-433-11	CARBON	22K	5%	1/4W
R860	1-249-423-11	CARBON	3.3K	5%	1/4W
R861	1-247-903-00	CARBON	1M	5%	1/4W
R862	1-247-903-00	CARBON	1M	5%	1/4W
R863	1-249-434-11	CARBON	27K	5%	1/4W
R864	1-249-434-11	CARBON	27K	5%	1/4W
R865	1-249-405-11	CARBON	100	5%	1/4W
R866	1-247-862-11	CARBON	20K	5%	1/4W
R867	1-249-425-11	CARBON	4.7K	5%	1/4W
R868	1-249-425-11	CARBON	4.7K	5%	1/4W
R869	1-247-862-11	CARBON	20K	5%	1/4W
R870	1-249-405-11	CARBON	100	5%	1/4W
R871	1-247-872-11	CARBON	51K	5%	1/4W
R872	1-247-872-11	CARBON	51K	5%	1/4W
R873	1-247-866-11	CARBON	30K	5%	1/4W
R874	1-249-437-11	CARBON	47K	5%	1/4W
R875	1-249-437-11	CARBON	47K	5%	1/4W
R876	1-247-866-11	CARBON	30K	5%	1/4W
R877	1-247-872-11	CARBON	51K	5%	1/4W
R878	1-247-872-11	CARBON	51K	5%	1/4W
R879	1-249-434-11	CARBON	27K	5%	1/4W
R880	1-249-432-11	CARBON	18K	5%	1/4W
R881	1-249-435-11	CARBON	33K	5%	1/4W
R882	1-247-895-00	CARBON	470K	5%	1/4W
R883	1-247-895-00	CARBON	470K	5%	1/4W
R884	1-249-435-11	CARBON	33K	5%	1/4W
R886	1-249-434-11	CARBON	27K	5%	1/4W
R887	1-249-415-11	CARBON	680	5%	1/4W
R888	1-249-415-11	CARBON	680	5%	1/4W
R889	1-249-429-11	CARBON	10K	5%	1/4W
R890	1-249-429-11	CARBON	10K	5%	1/4W
R891	1-249-433-11	CARBON	22K	5%	1/4W
R892	1-249-429-11	CARBON	10K	5%	1/4W
R894	1-249-435-11	CARBON	33K	5%	1/4W
R895	1-249-435-11	CARBON	33K	5%	1/4W
R896	1-249-435-11	CARBON	33K	5%	1/4W
R897	1-249-435-11	CARBON	33K	5%	1/4W
R898	1-249-435-11	CARBON	33K	5%	1/4W
R899	1-249-407-11	CARBON	150	5%	1/4W

< VARIABLE RESISTOR >

RV101	1-238-600-11	RES, ADJ, CARBON 10K
RV201	1-238-600-11	RES, ADJ, CARBON 10K
RV541	1-238-756-21	RES, VAR, CARBON 20K/20K/20K (REC LEVEL)

< SWITCH >

S801	1-554-303-21	SWITCH, TACTILE (B FF)
S802	1-554-303-21	SWITCH, TACTILE (B FWD)
S803	1-554-303-21	SWITCH, TACTILE (B REV)
S804	1-554-303-21	SWITCH, TACTILE (B REW)
S805	1-554-303-21	SWITCH, TACTILE (B STOP)
S806	1-554-303-21	SWITCH, TACTILE (B REC)
S807	1-554-303-21	SWITCH, TACTILE (B REC MUTE)
S808	1-554-303-21	SWITCH, TACTILE (B PAUSE)
S809	1-554-303-21	SWITCH, TACTILE (A FF)
S810	1-554-303-21	SWITCH, TACTILE (A FWD)

MAIN PANEL CONTROL SW REC VOL MD-A MD-D

Ref. No.	Part No.	Description	Remark
S811	1-554-303-21	SWITCH, TACTILE (A REV)	
S812	1-554-303-21	SWITCH, TACTILE (A REW)	
S813	1-554-303-21	SWITCH, TACTILE (A STOP)	
S814	1-571-452-11	SWITCH, SLIDE (DIRECTION MODE)	
S815	1-571-452-11	SWITCH, SLIDE (DOLBY NR)	
S816	1-554-303-21	SWITCH, TACTILE (TIME) (AEP, G, IT, E3)	
S817	1-554-303-21	SWITCH, TACTILE ((NORMAL SPEED) (UK, E2, AUS)	
S817	1-554-303-21	SWITCH, TACTILE (EDIT) (AEP, G, IT, E3)	
S818	1-554-303-21	SWITCH, TACTILE (FADE) (AEP, G, IT, E3)	
S819	1-554-303-21	SWITCH, TACTILE (HIGH SPEED) (UK, E2, AUS)	
S819	1-554-303-21	SWITCH, TACTILE (C. FADE) (AEP, G, IT, E3)	
S820	1-554-303-21	SWITCH, TACTILE (NORMAL SPEED) (AEP, G, IT, E3)	
S821	1-554-303-21	SWITCH, TACTILE (HIGH SPEED) (AEP, G, IT, E3)	
S831	1-554-303-21	SWITCH, TACTILE (A/B)	
S832	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S833	1-554-303-21	SWITCH, TACTILE (RESET)	
S834	1-554-303-21	SWITCH, TACTILE (FADER)	
S835	1-554-303-21	SWITCH, TACTILE (SAF)	
		< CERAMIC >	
X831	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz) (UK, E2, AUS)	
X831	1-567-775-11	VIBRATOR, CERAMIC (4.19MHz) (AEP, G, IT, E3)	
X851	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X852	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

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* 1-634-840-11 MD-A BOARD

****

< CAPACITOR >

C11	1-110-342-11	MYLAR	390PF	5% 50V
C12	1-136-157-00	FILM	0.022uF	5% 50V
C13	1-124-282-00	ELECT	22uF	20% 25V
C21	1-110-342-11	MYLAR	390PF	5% 50V
C22	1-136-157-00	FILM	0.022uF	5% 50V
C23	1-124-282-00	ELECT	22uF	20% 25V
C31	1-124-443-00	ELECT	100uF	20% 10V
C32	1-124-443-00	ELECT	100uF	20% 10V
C71	1-124-907-11	ELECT	10uF	20% 50V
C72	1-124-907-11	ELECT	10uF	20% 50V

< CONNECTOR >

CNP31	* 1-568-824-11	SOCKET, CONNECTOR 5P
CNP32	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P
CNP71	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P
CNP72	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P
CNP73	* 1-568-826-11	SOCKET, CONNECTOR 7P

Ref. No.	Part No.	Description	Remark
		< IC >	
IC31	8-759-111-44	IC uPC4570C-1	
		< TRANSISTOR >	
Q71	8-729-820-16	TRANSISTOR 2SA1317-S	
		< RESISTOR >	

R11	1-247-881-00	CARBON	120K	5%	1/4W
R12	1-249-405-11	CARBON	100	5%	1/4W
R13	1-247-882-11	CARBON	130K	5%	1/4W
R14	1-249-426-11	CARBON	5.6K	5%	1/4W
R21	1-247-881-00	CARBON	120K	5%	1/4W
R22	1-249-405-11	CARBON	100	5%	1/4W
R23	1-247-882-11	CARBON	130K	5%	1/4W
R24	1-249-426-11	CARBON	5.6K	5%	1/4W
R31	1-249-409-11	CARBON	220	5%	1/4W
R32	1-249-409-11	CARBON	220	5%	1/4W
R71	1-247-864-11	CARBON	24K	5%	1/4W
R72	1-249-433-11	CARBON	22K	5%	1/4W
R73	1-249-437-11	CARBON	47K	5%	1/4W
R74	1-249-437-11	CARBON	47K	5%	1/4W

< VARIABLE RESISTOR >

RV11	1-238-597-11	RES, ADJ, CARBON 1K
RV21	1-238-597-11	RES, ADJ, CARBON 1K
RV71	1-238-600-11	RES, ADJ, CARBON 10K
RV72	1-238-600-11	RES, ADJ, CARBON 10K

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* A-2006-305-A MD-D BOARD, COMPLETE

****

< CAPACITOR >

C11	1-110-342-11	MYLAR	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-282-00	ELECT	22uF	20%	25V
C21	1-110-342-11	MYLAR	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-282-00	ELECT	22uF	20%	25V
C31	1-124-443-00	ELECT	100uF	20%	10V
C32	1-124-443-00	ELECT	100uF	20%	10V
C33	1-124-119-00	ELECT	330uF	20%	16V
C51	1-136-230-00	FILM	0.0022uF	5%	100V
C52	1-136-230-00	FILM	0.0022uF	5%	100V
C53	1-130-856-00	FILM	0.0068uF	5%	100V
C54	1-136-601-11	FILM	0.01uF	5%	630V
C55	1-161-494-00	CERAMIC	0.022uF		25V
C56	1-126-157-11	ELECT	10uF	20%	16V

MD-D SW-A SW-B

Ref.No.	Part No.	Description			Remark
C57	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C71	1-124-907-11	ELECT	10uF	20% 50V	
C72	1-124-907-11	ELECT	10uF	20% 50V	
		< CONNECTOR >			
CNP31	* 1-568-824-11	SOCKET, CONNECTOR 5P			
CNP32	* 1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P			
CNP34	* 1-565-344-11	PIN, CONNECTOR (PC BOARD) 8P			
CNP71	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CNP72	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CNP73	* 1-568-826-11	SOCKET, CONNECTOR 7P			
		< DIODE >			
D31	8-719-107-94	DIODE 1SS202-1			
		< IC >			
IC31	8-759-111-44	IC uPC4570C-1			
		< TRANSISTOR >			
Q51	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q52	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q53	8-729-111-29	TRANSISTOR 2SD1616A-K			
Q71	8-729-820-16	TRANSISTOR 2SA1317-S			
		< RESISTOR >			
R11	1-247-881-00	CARBON	120K	5% 1/4W	
R12	1-249-405-11	CARBON	100	5% 1/4W	
R13	1-247-882-11	CARBON	130K	5% 1/4W	
R14	1-249-426-11	CARBON	5.6K	5% 1/4W	
R21	1-247-881-00	CARBON	120K	5% 1/4W	
R22	1-249-405-11	CARBON	100	5% 1/4W	
R23	1-247-882-11	CARBON	130K	5% 1/4W	
R24	1-249-426-11	CARBON	5.6K	5% 1/4W	
R31	1-249-409-11	CARBON	220	5% 1/4W	
R32	1-249-409-11	CARBON	220	5% 1/4W	
R51	1-249-441-11	CARBON	100K	5% 1/4W	
R52	1-249-441-11	CARBON	100K	5% 1/4W	
R54	1-212-849-00	FUSIBLE	4.7	5% 1/4W	F
R71	1-247-864-11	CARBON	24K	5% 1/4W	
R72	1-249-433-11	CARBON	22K	5% 1/4W	
R73	1-249-437-11	CARBON	47K	5% 1/4W	
R74	1-249-437-11	CARBON	47K	5% 1/4W	
		< VARIABLE RESISTOR >			
RV11	1-238-597-11	RES, ADJ, CARBON 1K			
RV21	1-238-597-11	RES, ADJ, CARBON 1K			
RV71	1-238-600-11	RES, ADJ, CARBON 10K			
RV72	1-238-600-11	RES, ADJ, CARBON 10K			

Ref.No.	Part No.	Description	Remark
		< RELAY >	
RY31	1-515-726-11	RELAY	
		< TRANSFORMER >	
T51	1-433-376-11	TRANSFORMER, BIAS OSCILLATION	
**********			
	* 1-634-841-11	SW-A BOARD	
		**********	
	3-343-419-01	HOLDER (S SENSER A)	
		< CONNECTOR >	
CNP81	* 1-568-852-11	SOCKET, CONNECTOR 9P	
		< IC >	
IC81	8-719-710-03	PHOTO REFLECTOR NJL5165K-B	
		< RESISTOR >	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)	
S82	1-571-281-21	SWITCH, LEAF (70EQ)	
S86	1-571-281-21	SWITCH, LEAF (HALF)	
**********			
	* 1-634-841-11	SW-B BOARD	
		**********	
	3-343-419-01	HOLDER (S SENSER A)	
		< CONNECTOR >	
CNP81	* 1-568-852-11	SOCKET, CONNECTOR 9P	
		< IC >	
IC81	8-719-710-03	PHOTO REFLECTOR NJL5165K-B	
IC82	8-719-710-03	PHOTO REFLECTOR NJL5165K-B	
		< RESISTOR >	
R81	1-249-414-11	CARBON 560 5% 1/4W	
R82	1-247-818-11	CARBON 300 5% 1/4W	
R83	1-247-834-11	CARBON 1.3K 5% 1/4W	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
R86	1-249-408-11	CARBON 180 5% 1/4W	

SW-B

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)	
S82	1-571-281-21	SWITCH, LEAF (70EQ)	
S83	1-571-281-21	SWITCH, LEAF (METAL)	
S84	1-571-281-21	SWITCH, LEAF (REC A)	
S85	1-571-281-21	SWITCH, LEAF (REC B)	
S86	1-571-281-21	SWITCH, LEAF (HALF)	

****

MISCELLANEOUS
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71	* 1-574-727-11	WIRE, FLAT TYPE (9 CORE)	
72	1-575-220-11	WIRE, FLAT TYPE (5 CORE)	
73	1-590-036-11	WIRE, FLAT TYPE (13 CORE)	
74	1-575-217-11	WIRE, FLAT TYPE (15 CORE)	
77	1-575-731-11	WIRE, FLAT TYPE (7 CORE)	
78	1-590-218-11	WIRE, FLAT TYPE (11 CORE)	
HE901	A-2003-477-A	BASE ASSY, HEAD (DECK B)	
HP901	A-2003-867-A	BASE ASSY, HEAD (DECK A)	
HRP901	A-2003-477-A	BASE ASSY, HEAD (DECK B)	
M901	X-3359-417-1	MOTOR (CAPSTAN) ASSY	

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ACCESSORY & PACKING MATERIAL
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	* 3-350-154-01	CUSHION	
	* 3-704-350-01	SHEET (STANDARD), PROTECTION	

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HARDWARE LIST

# 1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
# 2	7-682-547-04	SCREW +BVTT 3X6 (S)	
# 3	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
# 4	7-621-773-93	SCREW (PANEL 2.6 TP2)	
# 5	7-627-556-08	SCREW +P 2.6X2.8	
# 6	7-621-775-00	SCREW +B 2.6X3	
# 7	7-682-548-09	SCREW +BVTT 3X8 (S)	

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